REMARKS

The Office Action dated May 11, 2006 had been read and carefully considered and the present amendment submitted in order to further point out distinctions between the present invention and the cited prior art.

In that Office Action, claims 1-20, 28, 30-33, 35-37 and 30-53 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement, specifically, for claiming the "substrate has not been precision optically polished" where it is contended by the Examiner that the specification "does not teach an embodiment where the substrate is not polished".

Further, the same claims were rejected under 35 U.SC. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention on the basis again that "the specification does not teach a substrate that has not been precision polished".

As to the prior art, claims 1-20, 28, 30-33, 35-37 and 30-53 were rejected under 35 U.S. 103(a) as being unpatentable over Gagnon et al, U.S. Patent 5,764,355 in view of Eden et al, U.S. Patent 4,843,030, further in view of Applicant's admitted prior art (pages 3-8 of the original specification) or Izumi, U.S. Patent 4,932,780.

Finally, the Examiner has not given any weight to Applicants statements regarding "commercial success" and, on pages 5 and 6 of the Office Action, has set forth certain criteria that is considered necessary for a showing of that commercial success.

As stated in the Office Action, however, the criteria would seem to be place an almost impossible burden on an Applicant. Basically, the Supreme Court itself, has stated that commercial success was indicative of patentability of the invention and Applicant here has

submitted a Declaration showing the fact of increasing sales of the sample cards produced in accordance with the teaching of the present specification along with a Declaration of a renown expert in the applicable field attesting to the novelty and unobvious nature of the invention.

The criteria of the Office Action suggests that there was no "showing that others of ordinary skill in the art were working on the problem and, if so, for how long". Further the Examiner has stated "In addition, there is no evidence that if persons skilled in the art who were presumable working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem".

Taking the criteria, if valid, it would seem to be virtually impossible for any applicant to go to "others" in the field and then show that those "others" were working on the same problem, how long they were working on the problem and that the "others" had copies of the cited prior art in their possession.

It is submitted that such an onerous burden is not reasonable and that Applicant has submitted "facts" setting forth the increased sales for these products and a renown expert has opined that the invention is meritorious.

Furthermore, as the prior art cited in the present application shows, person skilled in the art were trying to solve the problem which resulted in the issuance of several patents for polymer based cards, *i.e* U.S. Patent 5,470,757 and U.S. Patent 5,764,355 which Applicant refers to as the 3M patents and screen cards, all of which have been issued within the last 11 years.

These inventions included the efforts of employees of the 3M Corporation, which is a renowned Fortune 500 company and a member of the Dow thirty industrials as well as others skilled in the art. It is the deficiencies in these inventions which the instant invention solves, namely, the absorbance peaks found in polymer cards. As Dr. de Haseth stated in his supplemental declaration, dated February 23, 2006: "In contrast to the existing sample cards described in the 3M patents ... the card ... of the Herpst application do[es] not have any

material absorbances that would interfere with spectroscopic analysis and in contrast to other sample devices, they are much more inexpensive and also disposable".

However, even if the Examiner continues to reject Applicants proof of commercial success, it is submitted that the Declarations of both Dr. de Haseth and Dr. Smolyarenko go beyond merely the issue of "commercial success". Dr de Haseth, as his CV illustrates, is a Professor of Chemistry at the University of Georgia and has co-authored a book entitled "Fourier Transform Infrared Spectometry". He has worked in the relevant field for many years, is extensively published and lectures in the field, and thus is certainly qualified to evaluate the present invention and opine on its novelty and unobviousness. Yet, that import of the Statement of Dr. de Haseth seems to have been ignored as being submitted only to provide a showing of commercial success.

Specifically, Dr. de Haseth states " It is my opinion, that it would be unexpected for one skilled in the art of spectroscopy to be able to construct a finished product in the form of a sample holder for an infrared spectrophotometer or infrared filtometer in accordance with the steps and recited features of that claim" (referring to claim 1 of the present application).

In the Supplemental Declaration of Dr. de Haseth, he comments on the fact that there are polymer based sample holders, of the type shown and described in the 3M patents and which have interference problems and there are sample holders of crystal or glass that have substrates that require precision optical polishing and he recognizes that the present substrate are neither polymers nor do they need precision optical polishing. Thus, the key to the present sample holders and substrates is that they can be produced relatively inexpensively, so that the sample holders are sufficiently cost effective to be simply disposed of after use, thereby bringing new economies to the use of spectroscopic instruments.

The same is true of the Declaration of Dr. Smolyharenko, an optical material scientist having over 40 years experience in the field and who has written extensively in the field of optics and optical devices as listed in his Publications. Again, a highly experienced and qualified expert in the field states "Use in a spectroscopic sampling device of an optic formed

merely by cleaving, fly cutting, chipping, milling, sawing or scaling without precision optically polished is therefore an unexpected result to those skilled in the art".

Accordingly, it is submitted that the opinions of two eminent scientists in the fields of optical instruments cannot be ignored but must be given weight in assessing the patentability of the present invention.

As to the Section 112 issues with respect to the "precision optical polishing", Applicant has cancelled that limitation from the claims and therefore the issues with respect to that limitation are believed to be moot.

A new limitation has, however, now been incorporated into the claims that limits the substrate to a solid, non-porous material and which better defines the present invention over the references of record. As set forth in the specification, the preferred material for the substrate is a crystal and the definition of a crystal has previously been stated in the Amendment dated November 29, 2005 as follows. By definition, a crystal is a solid. The Phonics Dictionary states its definition of a crystal as "A solid with a structure that exhibits a basically symmetrical and geometric arrangement". Further, in dictionary.com, the initial definition of a crystal is "A homogeneous solid formed by a repeating, three dimensional pattern of atoms, ions or molecules and having fixed distance between constituent parts". (Emphasis added)

Turning to the prior art, it is again reiterated that the Gagnon *et al* reference relates to the use of a receiving means that is said to be a screen as described in U.S. Patent 5,453,252 or a microporous sheet as described in U.S. Patent 5,4709,757 (column 2, lines 54-59). As to the former embodiment where the receiving means is a screen, the materials are suggested to include glass, quartz, metals, alloys as well as polymeric material such as nylons, polyethylenes, polystyrenes, fluoropolymers (e.g. polytetrafluoroethylene), polyamides, polyaramids, polybutadiene etc.

The materials listed by the Examiner i.e. glass, quartz or polymeric material are used only in the first embodiment, that is, the screen having a grid pattern similar to window screens.

The second embodiment, the microporous sheet, makes no reference to being made of glass or quartz and only appears to be constructed of polymeric materials. The problems with the interference to the relevant wavelengths with the use of polymeric materials has previously been explained and is discussed in detail in the present specification on page 3, beginning at line 16.

As confirmation thereof, certainly, with the second embodiment, a microporous sheet is not produced by the steps specifically delineated in claim 1 or any of the other independent claims. While various material are disclosed as usable to make up the microporous material it is important to note that the materials are not necessarily selected due to their transparency to infrared radiation. The materials are selected to make up the micromesh and it is the voids that are of importance since the voids hold the material to be analysed and thus the voids volume is suggest to be in the range of 50 to about 98 % so that the thin microporous material does not affect or interfere with the radiation passing therethrough. Thus, the material need not be transparent to the radiation; its effect is minimized by making the mesh very thin (when polyethylene, the thickness is suggested to be less than about 150 μm) and the void volume great so as to simply minimize the effect of the mesh material on the accuracy of the analysis.

Returning to the first embodiment, the grid pattern screen would seem to be the only embodiment of Gagnon *et al* relied on by the Examiner. Again, however, Applicant reiterates the basic difference between the grid type of screen of Gagnon *et al* and the solid, non-porous crystal of the present invention produced by very specific steps. As can be seen by the definition of a crystal and the new limitation of the material being a solid, non-porous material that Applicant has defined the present invention in a manner that would distinguish over a screen having a grid patter similar to a window screen that simply cannot be produced by cleaving, fly cutting, chipping milling or scaling.

The second reference, that of Eden et al, has apparently been cited to show that the cleaving of a NaCl crystal is old. Again however, Applicant is not claiming that the cleaving of any crystal is new; just its application in producing a finished product sample card.

It is further submitted that there is no way that the references of Gagnon *et al* and Eden *et al* can logically or reasonably be combined. First of al, the Gagnon *et al* reference utilizes fibers in constructing a microporous screen and the materials for that screen are indicated as being glass, quartz or polymeric materials. It is simply not understood how the ability to cleave NaCl as shown in Eden *et al* has anything to do with producing a microporous grid patterned screen of glass, quartz of polymeric materials. Nor does the mere step of cleaving seem at all appropriate in producing a microporous substrate that is comprised of fibers. Simply put, the ability to cleave NaCl has no relevance to producing a patterned screen made up of fibers and therefore the combination of Gagnon et al and Eden et al is clearly not feasible.

Accordingly, it is submitted that the claims currently in the present application are in allowable form over the references of record and an allowance of the present application is respectfully solicited.

Respectfully submitted,

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